GEOPOLITICS

CHINA CURBS TUNNEL BORING MACHINE EXPORTS. INDIA MUST MAKE ITS OWN

By **Kamlesh Bhagatkar**, *Politician, Author & Geopolitical Analyst · 16 November 2026*

From Wednesday, 18 November, China's new export controls on tunnel boring machines (TBMs) come into force. The Ministry of Commerce and the General Administration of Customs issued them on 19 October as Announcement No. 50 of 2026, and they cover shield machines, hard-rock tunnel borers and their main parts: cutterheads, main drive systems, segment erectors and screw conveyors, along with the technology for remanufacturing them. Walking excavators built for rough terrain and wet shotcrete machines for building above 3,000 metres are on the list too, according to China Daily and a trade summary of the announcement by HS Code Match.

China has not banned these exports. It has made them conditional. Shipments to "sensitive countries and regions" that have disputes with China will need a licence from Beijing, and shipments elsewhere will need a registration certificate. Foreign buyers will also be barred from passing Chinese-made machines on to those sensitive destinations without approval. Beijing has not published the list of sensitive countries. I do not think we need the list to know that India is on it.

A Chinese Commerce Ministry spokesperson said the items have clear dual-use characteristics and that China will approve licence applications that meet its rules, China Daily reported. Chinese commentators have been more direct. Li Guangman of the Kunlunce Research Institute said restricting this equipment would let Beijing constrain India's building of military transport networks near the Line of Actual Control, according to The China-Global South Project.

Why a tunnelling machine is a strategic item

Look at what the list covers: borers, excavators that climb slopes and cross trenches, and concrete sprayers for work above 3,000 metres. That is the kit you need to build roads, railways and tunnels in the Himalaya. I read the high-altitude clause as a message aimed at us, whatever the official language says.

Our frontier is being built with exactly these machines. Two days ago, External Affairs Minister S Jaishankar linked the larger, permanent troop presence on the China border to the tunnels, bridges and airfields we keep commissioning (I wrote about his remarks here). Bloomberg has reported that India plans to invest USD 4.7 billion over two years in railway upgrades along its borders with China, Pakistan and Bangladesh, as The China-Global South Project notes. A licence regime in Beijing gives China a say over the pace of that work.

It is not only the border. Metro lines, hydropower projects, the Mumbai-Ahmedabad high-speed rail and highway tunnels all run on TBMs. Union Minister Nitin Gadkari has urged Indian companies to start making these machines at home, and Swarajya's report of his appeal puts India's planned spending on tunnelling at Rs 7 to 8 lakh crore over five years. The same report counts 35 tunnels of 49 km completed and 69 tunnels of 134 km under construction, worth about Rs 40,000 crore.

We have been here before

The new rules write down a pressure India has felt for two years. Swarajya, citing Business Standard, reported that Beijing slowed customs clearance of TBM shipments to India from 2024, and that our imports of tunnelling machinery from China fell from USD 18 million to USD 3 million in 2023-24, then to USD 500,000 in 2024-25.

The bullet train shows what that meant on the ground. Swarajya reported in March that two Herrenknecht Mixshield machines for the 21-km underground stretch between Bandra-Kurla Complex and Shilphata, each more than 13 metres across, were built at the German company's factory in Guangzhou and were due by October 2024. Herrenknecht cited "extraordinary circumstances" in Chinese customs. The machines were unloaded at JNPT only on 23 March 2026, after the issue was raised, by Swarajya's account, through the Prime Minister's Office, the MEA and talks with Berlin and Beijing.

In August 2025, Chinese Foreign Minister Wang Yi told Jaishankar in New Delhi that China was addressing India's concerns on fertilisers, rare earths and tunnel boring machines, ANI reported, citing sources. Jaishankar said in public at the time: "It is also essential in this context that restrictive trade measures and roadblocks are avoided." Fourteen months later, China has written the restriction into its export rules.

How deep is the dependence? The China-Global South Project cites a 2020 Indian Express investigation in which suppliers estimated that nearly 90 per cent of TBMs working in India had links to China. Indian officials, it reports, have played down the risk of widespread highway delays but accept that the high-speed rail could face shortages. The fall in direct imports does not mean the dependence has gone. As the bullet train case shows, machines can reach us from the Chinese factories of Western firms, and the new rule on onward transfers covers that route as well.

India's answer so far

The Government's answer has been firm in public. "When they restricted rare earths, we did not go around begging," Commerce Minister Piyush Goyal said on 3 November at Kirori Mal College in Delhi, according to Business Today. "But if they refuse to provide tunnel boring machines, we will develop them ourselves in India." He also said India wanted good ties with China.

Railway Minister Ashwini Vaishnaw has said that 8-metre TBMs are now made in India, that production of 15-metre machines has begun at a plant in Tamil Nadu, and that machines above 16 metres will follow. "This means India is becoming self-reliant in tunnel boring machines, from design and manufacturing to maintenance," he said, as Business Today reported. Swarajya carried the same figures.

There is a base to build on. Metro Rail Today reports that Herrenknecht has assembled TBMs in Chennai since 2007, turning out 10 to 12 metro-size machines a year with about 70 per cent of components sourced locally, and that it plans a new plant of about Rs 250 crore for machines up to 15.62 metres. State-owned BEML has explored partnerships with foreign engineering firms to build machines from 6 to 16.5 metres, Swarajya reports. And the Centre is considering a USD 1.2 billion incentive scheme to attract USD 1.8 billion of investment over seven years in construction equipment including TBMs, according to Reuters and Business Standard reports cited by The China-Global South Project and Swarajya. The scheme had not been approved when those reports appeared.

What I think we should do, and what to watch

I welcome the confidence, but I would be careful with the word "self-reliant". Assembling a machine is one thing. The parts China has listed, the cutterhead and the main drive, sit at the heart of the machine. If 30 per cent of a Chennai-built machine still comes from abroad, the question is which 30 per cent, and from where. In my view, any incentive scheme should pay for local value in those parts, and for local repair and remanufacturing, because a borer stalled under a mountain for want of a spare part is a strategic problem as well as a commercial one.

I would also keep buying from Germany, Japan, the United States and anyone else whose factories sit outside China, while Indian capacity grows. The bullet train case shows that a Western brand alone is no protection.

Three things to watch after Wednesday. First, whether Chinese suppliers get licences for Indian orders at all, and how long the wait is. Second, whether the Union Cabinet clears the incentive scheme. Third, whether BEML names a foreign technology partner and a first machine, so that its plans move from paper to tunnel.

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